Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte HENRY CHUNG

Appeal No. 2004-0592
Application 09/328,645

ON BRIEF

Before WALTZ, TIMM, and PAWLIKOWSKI, Administrative Patent Judges.

PAWLIKOWSKI, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 5, 6, and 7.

Claims 5, 6, and 7 are set forth below:

5. An integrated circuit structure which comprises

(a) a substrate;

(b) a layer of a first polymeric dielectric material on the substrate;

(c) a plurality of spaced apart metal contacts on the layer of the first polymeric dielectric material;

(d) a space between adjacent metal contacts, each space being filled with a second polymeric dielectric material;

(e) a recess in the filled spaces of the layer of the second polymeric dielectric material extending from a level at a top of the metal contacts a part of the distance toward the substrate;

(f) an additional layer of the first polymeric dielectric material on at least some of the metal contacts and in the recesses on the filled spaces of the second polymeric dielectric material such that there is optionally a gap in at least one of the recesses of the additional layer of first polymeric dielectric material at a side wall of a metal contact;

(g) at least one via extending through the additional layer of the first polymeric dielectric material extending to the top of at least one of the metal contacts and optionally to said gap;

wherein the first dielectric material and the second dielectric material have substantially different etch resistance properties.

6. The integrated structure of claim 5 wherein the via is filled with at least one metal.

7. The structure of claim 5 wherein the first polymeric dielectric material is organic and the second polymeric dielectric material is inorganic.

The reference relied on by the examiner is:

Lu et al. (Lu)	6,008,540	Dec. 28, 1999 (filed May 28, 1998)

Claims 5-7 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Lu.

On pages 4-5 of the brief, appellant groups the claims as follows: Group I: claims 5 and 6, and Group II: claim 7. Insofar as the claims have been separately argued, we will address the claims separately. See 37 CFR § 1.192(c)(7)(8)(2003).

OPINION

For the reasons set forth in the answer, and below, we affirm the rejection.

On pages 7-9 of the brief, appellant argues that Lu does not apply an additional layer of the first polymeric material on at least some of the metal contacts and in the recesses on the filled spaces of the second polymeric dielectric. Also, on page 2 of the reply brief, appellant argues that Lu's layer 144 is not on the substrate.

Critical to our determinations made herein is the claim interpretation of the word "on" as recited in component (b) and (f) of claim 5. The examiner, for example, states on page 6 that the argued feature of the second dielectric material being in contact with the metal contacts and with the first dielectric, is not required by the claims.

It is a long-standing legal principal that, during examination proceedings, claims are to be given their broadest reasonable interpretation consistent with the specification. In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). However, while claims are to be interpreted in light of the specification and with a view to ascertaining the invention, it does not follow that limitations from the specification may be read into the claims. Sjolund v. Musland, 847 F.2d 1573, 1581, 6 USPQ2d 2020, 2027 (Fed. Cir. 1988). This is because it has been repeatedly held that limitations from the specification are not to be read into the claims. Amgen, Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1325, 65 USPQ2d 1385, 1393 (Fed. Cir. 2003); E.I. Dupont de Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1433, 7 USPQ2d 1129, 1131 (Fed. Cir.), cert. denied, 488 U.S. 986 (1988).

A fine line sometimes exists between reading a claim in light of the specification and reading a limitation into the claim from the specification. Notwithstanding this fine line, it is reasonably clear in this case that the appellant would have us read a limitation into the claims from the specification.

First, there is a heavy presumption that a claim term carries its ordinary and customary meaning. Amgen, Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d at 1327, 65 USPQ2d at 1394. In the instant case, the subject specification disclosure does not exclude an embodiment whereby the first polymeric layer is indirectly on a substrate. We can say this because, for example, appellant's Figures 2C, 2D, 2E, and 2F do not depict that the first polymeric dielectric material is directly on a substrate (no substrate is shown). Also, as another example, on page 10 of appellant's specification, beginning at line 20, Figure 2(c) is described. The specification states that Figure 2(c) is directed to an embodiment that uses two different kinds of dielectrics. Such disclosure suggests that the important aspect of Figure 2(c) is really the use of two different kinds of dielectrics, not whether or not in fact the first dielectric is directly on a substrate. In this way, we find that appellant at least implicitly has used the ordinary and customary meaning of the claim term "on" to encompass an interpretation wherein the first polymeric dielectric material can be indirectly on a substrate. Though such a claim interpretation is broad, it is not unreasonable or inconsistent with the appellant's specification since the specification contains no restricted definition of the term "on" which would require the more narrow claim construction asserted by the appellant. See In re Hyatt, 211 F.3d at 1372-73, 54 USPQ2d at 1668.

Indeed, the disclosure of the subject specification and Figures do not in any way characterize that the word "on" means "directly on" or "in contact with". Thus, while the disclosure would convey to an artisan that the appellant's invention includes an embodiment wherein a particular layer is deposited directly on a substrate, it certainly does not convey that the appellant's invention excludes an embodiment wherein said layer is deposited indirectly on a substrate. When viewed from this

perspective, it is apparent that appellant's claim interpretation is more narrow than, not only the claim language, but also the specification disclosure, and therefore includes the impermissible practice of reading a limitation of the specification into the claims.

In view of the above, we now turn to the facts of this case.

We refer to the examiner's discussion on pages 5 and 6 of the answer in regard as to how Lu meets certain aspects of the claimed invention. We incorporate the examiner's fact findings in connection with Lu as our own. We agree with the examiner that Figure 1(g) of Lu teaches that an additional layer of first polymeric layer 174 is positioned on metal contacts 160 and in the recesses (layer 174 fills in any recesses found in layer 172). Likewise, in Figure 2(b), Lu shows additional first polymeric layer 274 on metal contacts 260, with filling of any recesses found in layer 272. Also, layer 144 shown in Lu's Figure 1(g) is "on" substrate 102, as we interpret this word "on", as discussed supra.[1]

On pages 8 and 9 of the brief, appellant argues that Lu does not teach that the first and second dielectric materials have substantially different etch resistant properties. On page 6 of the answer, the examiner rebuts and states that this argument is not persuasive because Lu teaches the first and second dielectric materials are different (xerogel or HSQ) and therefore, it is inherent that the first and second dielectric materials have

[1] Because we agree with the examiner's reading of Lu, we do not agree with appellant's position stated in the reply brief that the examiner's reading is incorrect, for the reasons stated in this paragraph.

substantially different etch resistant properties. Appellant has not shown this not to be true. We, therefore, agree with the examiner on this issue.

In view of the above, we therefore affirm the rejection.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

THOMAS A. WALTZ
Administrative Patent Judge)
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